

REMARKS

This Amendment is fully responsive to the non-final Office Action dated July 27, 2009, issued in connection with the above-identified application. Claims 1-11 are pending in the present application. With this Amendment, claims 1 and 7-9 have been amended, and claims 12-17 have been added. No new matter has been introduced by the amendments made to the claims or by the new claims added. Favorable reconsideration is respectfully requested.

In the Office Action, claims 1-11 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Naruse (U.S. Publication No. 2002/0183026, hereafter “Naruse”) in view of Roman (U.S. Publication No. 2004/0154043, hereafter “Roman”), Delavega (U.S. Publication No. 2005/0034158, hereafter “Delavega”), and further in view of Markman (U.S. Publication No. 2003/022966, hereafter “Markman”).

The Applicants have amended independent claims 1 and 7-9 to help further distinguish the present invention from the cited prior art. For example, claim 1 (as amended) recites *inter alia* the following features:

“[a] content reproduction device that performs streaming reproduction of a content, the device comprising:

a plurality of communication units, each being configured to receive pieces of segmented data of a content transmitted from a content transmission device over a communication path;

a content reconstruction unit having a buffer in which the pieces of segmented data received by a corresponding one of said plurality of communication units is temporarily accumulated, and configured to reconstruct the pieces of segmented data accumulated in the buffer into the content; ...

wherein the pieces of segmented data each includes a counter indicating an order of the segmentation performed by said content transmission device, and

said content reconstruction unit is configured to reconstruct the content by extracting the pieces of segmented data accumulated in the buffer in order of values indicated by said respective counters. (Emphasis added).

The features noted above in independent claim 1 are similarly recited in independent claims 7, 8 and 9 (as amended). That is, independent claim 8 is directed to a corresponding content reproduction method that includes steps directed to the features emphasized above in

independent claim 1. Additionally, independent claim 7 is directed to a content transmission device and independent claim 9 is directed to a content transmission method, and both claims have been amended to include the features emphasized above in independent claim 1.

The features emphasized above in independent claim 1 (and similarly recited in independent claims 7-9) are fully supported by the Applicants' disclosure (see e.g., ¶ [0123]-¶ [0126]; and Fig. 18).

The present invention (as recited in independent claims 1 and 7-9) is distinguishable from the cited prior art in that communication units receive pieces of segmented data into which a single content is segmented. In order to reproduce the original single content at the reception side of the communication units, the received pieces of segmented data need to be reconstructed in the same order as has originally been ordered before their segmentation. In the present invention (as recited in independent claims 1 and 7-9), each of the packets (i.e., namely, the pieces of segmented data) includes a counter (see element 702 of Fig. 18) that indicates a packetizing order. The content reconstruction unit is able to reconstruct the pieces of segmented data into the original single content by reading the packets, which are the pieces of segmented data accumulated in the buffer, in the order of the value of the counter included in each packet.

In the Office Action, the Examiner relies on Naruse, Roman, Delavega and Markman for disclosing or suggesting all the features recited in independent claims 1 and 7-9. However, the Applicants assert that the above cited prior art fails to disclose or suggest all the features now recited in independent claims 1 and 7-9 (as amended). In particular, none of the cited prior art discloses or suggests that an original single content is reconstructed, using information indicating the segmenting order of the content, as recited in independent claims 1 and 7-9 (as amended).

Naruse discloses a wireless communication system for controlling data communication quality between the transmission system that transmits content and a mobile wireless terminal that receives the content via a predetermined communication path. More specifically, the transmission system changes the modulation system in a data output unit to correspond to the type of content to be transmitted to the mobile wireless terminal.

Roman discloses a system that delivers cable content from a community antenna television network via a telecommunications network. This cable content includes analog and digital video, music, and data. The cable content is communicated from the community antenna

television network to a telecommunications network, and the telecommunications network then communicates the cable content to end-users.

Delavega discloses a method of providing image content from at least one mobile content provider, coupling the image content from the mobile content provider to a network, presenting the image content from the mobile content provider for selection, and selecting the content.

Finally, Markman discloses that a reviewer edits a media program stored in digital form, and stores the edited information in a separate meta data file. The meta data can include supplemental content, indicia defining highlight segments, skipped-over segments, content categorization and the like. The meta data files are distributed to other users via various networks, or manually, including a decentralized, peer-to-peer network or a centralized client-server network.

As noted above, none of the cited prior art discloses or suggests that a content reconstruction unit of a communication unit (that receives content) is able to reconstruct pieces of segmented data into the original single content by reading the packets, which are the pieces of segmented data accumulated in a buffer, in the order of the value of the counter included in each packet, as recited in independent claims 1 and 7-9 (as amended).

Based on the above discussion, no combination of Naruse, Roman, Delavega and Markman would result in, or otherwise render obvious, independent claims 1 and 7-9 (as amended). Likewise, no combination of Naruse, Roman, Delavega and Markman would result in, or otherwise render obvious, claims 2-6, 10 and 11 at least by virtue of their respective dependencies from independent claims 1, 8 and 9.

The Applicants also assert that the cited prior art fails to disclose or suggest all the features recited in new independent claim 12. Independent claim 12 recites the following features:

“[a] content reproduction device that performs streaming reproduction of a content, the device comprising:

a plurality of communication units, each being configured to receive pieces of segmented data of a content transmitted from a content transmission device over a communication path;

a content reconstruction unit having a buffer in which the pieces of segmented data received by a corresponding one of said plurality of communication units is temporarily

accumulated, and configured to reconstruct the pieces of segmented data accumulated in the buffer into the content;

a reproduction unit configured to extract the content from the buffer at a predetermined bit rate and to reproduce the content at the predetermined bit rate, the content having been reconstructed by said content reconstruction unit;

a communication fee accumulation unit configured to accumulate, in advance, communication fees of the respective communication units; and

a communication control unit configured to:

determine a use order of said plurality of communication units based on the communication fees accumulated in the communication fee accumulation unit,

calculate, for every predetermined time, target transmission speeds to be assigned for content reception by causing the target transmission speeds to associate respectively with said plurality of communication units, based on the determined use order, free space in the buffer and the bit rate; and

transmit a first request signal indicating the calculated target transmission speeds corresponding to said plurality of communication units to the content transmission device via one of said plurality of communication units.” (Emphasis added).

The features emphasized above in independent claim 12 are fully supported by the Applicants’ disclosure (see e.g., ¶ [0069]; ¶ [0070] to ¶ [0074; Fig. 8; and Fig. 10).

Independent claim 12 is distinguishable from the cited prior art based on the use of a communication fee accumulation unit (see element 108 of Fig. 8). Further, independent claim 12 includes an communication control units that: i) determines a use order of a plurality of communication units based on the communication fees accumulated in the communication fee accumulation unit, and ii) calculates target transmission speeds, based on the determined use order, free space in the buffer and a bit rate (see e.g., ¶ [0070] to ¶ [0074]; and Figs. 8 and 10).

None of the cited prior art discloses or suggests that use order of communication units is determined based on the communication fees for the corresponding communication units.

Accordingly, no combination of Naruse, Roman, Delavega and Markman would result in, or otherwise render obvious, independent claim 12. Similarly, no combination of Naruse, Roman, Delavega and Markman would result in, or otherwise render obvious, claims 13-17 at least by virtue of their dependencies (directly and indirectly) from independent claim 12.

Moreover, dependent claim 13 is also believed to be distinguishable from the cited prior art on its own merit. New claim 13 includes similar features to those added to independent claims 1 and 7-9 (as amended). That is, dependent claim 13 recites that the pieces of segmented data include a counter indicating an order of the segmentation performed by the content transmission device, and a content reconstruction unit is configured to reconstruct the content by extracting the pieces of segmented data accumulated in the buffer in order of values indicated by the respective counters. Accordingly, dependent claim 13 is distinguished from the cited prior art for similar reasons noted above for independent claims 1 and 7-9.

In light of the above, the Applicants respectfully submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the present application to issue. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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